

Fuller, William S.	DCMA
Guthridge III, George A.	Kwajalein Test Range
Hirschman, Keith A.	Product Improvement/Future Systems
Hitz, Stephen E.	Infantry Carrier Vehicle
Hummel, Michael L.	DCMA Milwaukee
Jacobs Jr., Ronald	Communication Management Systems
Kilgallon, John C.	Army Human Resource Systems
Lane, Edward J.	Tactical Applications
Lemondes Jr., John	Clothing and Individual Equipment
Mansir, Martin J.	Extremely High Frequency Satellite Systems
Mason, Patrick H.	Aviation Technical Test Center
McVey, Wade L.	DCMA St. Louis
Morris, Jeffrey S.	Third Army Contracting-Qatar
Richard, Paul (CIV)	Aviation Rockets and Missiles
Payne, Thomas L.	Common Missile Launchers
Pincoski, Mark J.	Precision Guided Munitions
Pope, Joseph K.	DCMA Sealy
Pulford, Scott A.	Ground Combat Tactical Training
Puthoff, Frederick, A.	National Training Center Acquisition Command-Fort Irwin
Rettie, Craig L.	Force Sustainment Systems
Rodgers, Kenneth P.	Maneuver Control Systems
Rush, Christian E.	Air Traffic Control
Schafer, Joseph H.	Defense Satellite Communication Systems Terminals
Steinbugl, Louis F.	DCMA Detroit-Lima
Stoddard, Kevin P.	Crew-Served Weapons
Switzer, Michael R.	Scout/Attack Helicopter
Visconti, Albert J.	Fire Finder
Wells, Charles A.	Defense Communication Army Switch System-Europe
Wiley, Danny A.	Air and Missile Defense Command and Control Systems
Williams, Julian R.	Information Warfare
Zarbo, Michael E.	Combat Training and Instrumentation System

News Briefs

The Hot Humvee Becomes a Little Cooler

Ashley John

With summer temperatures reaching 130 degrees Fahrenheit in the desert, heat issues are as serious as enemy fire for Soldiers in Iraq. To lower this serious health risk, the U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC) is working to reduce extreme heat conditions inside military vehicles. TARDEC, headquartered at the Detroit Arsenal in Warren, MI; the Natick Soldier Center (NSC); U.S. Army Tank-automotive and Armaments Command (TACOM); Program Executive Office for Combat Support and Combat Service Support; TACOM Safety Office; Product Manager (PM) Air Warrior; and Army Research Laboratory are developing a heat-relief tool to ensure safe and successful Soldier mission completion.

Intense heat conditions became evident during installation of the 2- and 4-door Armor Survivability Kits (ASKs) in existing Humvees in Iraq and Afghanistan. ASKs provide increased survivability to deployed Soldiers. Unfortunately, the kits raise temperatures to more than 100 degrees Fahrenheit inside the vehicles. According to PM Tactical Vehicles, Soldiers could not properly complete missions because of the extreme heat and humid conditions. Thus, finding a quick solution to this problem was a must.

Industry began initial installation efforts to lower temperatures inside Humvees. Red Dot Corp., a Seattle-based mobile heating and air-conditioning (A/C) system supplier for the heavy-duty and off-road industries, manufactured an A/C system that provided heat relief to Soldiers in theater. The A/C system was modified to satisfy Humvee weight and space limitations. Following Red Dot A/C system evaluations at Aberdeen Test Center, temperatures inside ASK-equipped Humvees were still too high. A supplemental cooling system was needed to sustain Soldier performance levels and body comfort.

Applications focused on supplying a quick-fix solution for Soldiers. The interim solution used the Steele Vests worn by

Acquisition Trivia

The *Defense Acquisition Workforce Improvement Act (DAWIA)* was signed into law in 1990.

Navy sailors who work in ships' hot boiler rooms. The vests contain freezable gel strips, similar to ice packs, which are placed in a pouch to cool the sailor's body. In May 2004, NSC conducted a study to assess whether the cooling vest could fit under Soldiers' interceptor body armor. Army research indicated that the Steele Vest could be worn under an armored vest, but it was too short and only covered the Soldier's torso.

However, this quick-fix solution proved to be impractical for Soldiers in Iraq. The gel strips only lasted for 90 minutes, while Soldier missions lasted up to 8 hours, and there wasn't a way to recharge/refreeze the gel.

During ongoing research at NSC, TARDEC looked at two other currently used personal cooling systems that would supplement the Red Dot A/C unit — the Liquid Cooling Vest and the Air Cooling Vest. Each vest was rapidly fielded for near-term deployment.

Two NSC Microclimate Cooling Sub-Systems (MCSS), used in Apache and Air Warrior helicopters, were tested as possible long-term solutions for cooling internal Humvee temperatures. The modified Apache-style MCSS was evaluated in concurrence with the Red Dot A/C system. The vest, manufactured by Foster-Miller Inc., uses the Humvee's A/C unit to chill a fluid that is pumped into a microclimatic cooling garment (MCG). The liquid system consists of a heat exchanger; an MCG; and a flow control assembly that includes a pump, valve and manifold. The flow control assembly distributes the chilled fluid flow to four Soldiers and pulls heat away from their bodies.

By integrating the Apache and Air Warrior MCSSs for use in Humvees and other tactical vehicles, TARDEC can further develop cooling systems used in vehicles that do not currently have any form of air conditioning. A tactical vehicle fleet review will determine whether supplemental cooling requirements exist for additional systems. The improved Apache vest system has been modified into a Humvee-

unique system with the only remaining commonality being the garment.

TARDEC also performed and integrated on-the-spot modifications to the Red Dot A/C system to adjust the Air Vest from the M1 Abrams cooling system to fit the Humvee. This vest uses tubing to connect the garment to the vehicle's air duct, allowing cool air to flow through it. The system has individual connectors that supply cool air for a maximum of four Soldiers.

Air cooling system assessments are being performed at TARDEC's Propulsion Test Facility. The cooling systems are undergoing evaluations that involve high temperatures with solar effects to simulate similar environmental conditions that are found in Iraq. During testing, considerations were taken on how a Soldier's body would react to extreme temperature changes, eliminating the possibility of heat shock. Evaluations showed that the Liquid Vest and the Air Vest both significantly reduce Soldier body temperature.

Product configuration and final installation of prototypes were completed in only 2 months. In August 2004, 20 systems were fielded to Iraq — 10 Air Vest systems and 10 Liquid Vest systems. When the vests arrived, LTC Jeff Carr from PM Tactical Vehicles provided instructional pre-briefs to Soldiers in Iraq who received the cooling kits. Additionally, TARDEC has implemented an online evaluation system

where cooling system feedback is received immediately. This system provides TARDEC with the information and ability to address issues that arise and fix problems that occur in the field before additional cooling kits are deployed.

Developing a cooling system for the Humvee has been a group effort. TARDEC engineers and other team members worked diligently to find a solution to Soldier needs, providing a more safe and tolerable battlefield environment.

Ashley John is a Booz Allen Hamilton contractor supporting the TARDEC Technology Promotions Team.



Although ASKs provide increased survivability to deployed Soldiers, the kits cause temperatures inside Humvees to rise to more than 100 degrees Fahrenheit. TARDEC is developing a cooling system to solve this problem. (U.S. Army photo by SPC James Smith.)

Historic Change of Command Ceremony Conducted at Aberdeen Proving Ground

Larry D. McCaskill

The U.S. Army Research, Development and Engineering Command (RDECOM) conducted its first change of command ceremony Oct. 28, 2004, as MG John C. Doesburg relinquished command to BG Roger A. Nadeau on Aberdeen Proving Grounds' Fanshaw Field.

RDECOM, headquartered at Aberdeen Proving Ground, MD, became "official" March 1, 2004, after its concept plan was approved by the Department of the Army. RDECOM consists of more than 30,000 military, civilian and full-time contractor personnel, who are charged with moving technology from the laboratories into the hands of warfighters as quickly as possible. As such, it is responsible for 75 percent of the Army's science and technology objectives. RDECOM seeks out and develops the latest technology to provide the most advanced weapons, communication, clothing, food and vehicles, using 110 direct liaisons to the field and more than 300 international agreements. RDECOM brings together laboratories and research and engineering centers nationwide.

Larry D. McCaskill is the Public Affairs Specialist, G-5 Public Affairs, RDECOM.



BG Roger A. Nadeau (left) receives the RDECOM flag from former AMC Commanding General GEN Paul J. Kern. (U.S. Army photo by Ralph Broth.)

ARL Names New Director

The Commander, U.S. Army Research, Development and Engineering Command (RDECOM), has announced the selection of John M. Miller as U.S. Army Research Laboratory (ARL) Director. Miller has been serving as ARL Acting Director since March 2003.



ARL Director John M. Miller. (U.S. Army photo.)

In making the announcement, then Commander MG John C. Doesburg said, "We look forward to Miller's continued success and proven leadership in directing ARL to new horizons in research, which is so vital to the mission accomplishment of American warfighters around the world."

Miller has a B.S. in aerospace engineering and an M.S. in mechanical engineering, both from the University of Maryland. In 1980, he received the U.S. Army Research and Development Award for outstanding technical achievement, and in 1988, he was appointed to the federal government's Senior Executive Service.

ARL, part of RDECOM, is the Army's corporate laboratory for fundamental and applied research. ARL provides key technologies and analytical support as well as critical links between the scientific and military communities to help American Soldiers on the battlefield. ARL has major sites at both the Adelphi Laboratory Center and Aberdeen Proving Ground in Maryland, and White Sands Missile Range in New Mexico. In addition, ARL shares facilities with NASA at two sites: NASA-Langley, Hampton, VA; and NASA-Glenn, Cleveland, OH. ARL's extramural basic research program is managed by its Army Research Office in Research Triangle Park, NC.

Army's Carroll Wins Mendenhall Leadership Award

*Jason Miller, Government Computer News**

From almost the beginning, Kevin Carroll said he saw the benefits of bringing the vendor and federal information technology (IT) communities closer together. Carroll, the Army's Program Executive Officer for Enterprise Information Systems, helped organize one of the first Industry Advisory Council (IAC) Executive Leadership Conferences nearly 15 years ago and has never shied away from providing the same insight and elbow grease to future events.

For his commitment and enthusiasm in supporting the federal IT community, the American Council for Technology (ACT) and IAC honored Carroll Oct. 25, 2004, with the Janice K. Mendenhall Spirit of Leadership Award at the 14th Annual Executive Leadership Conference.

The Spirit of Leadership Award is named after Mendenhall, who made such collaboration a focus of her 32-year government career. The annual award is given by ACT and IAC officials in memory of Mendenhall, who worked to strengthen the relationships between government and industry officials in her role in the industry/government organization. Mendenhall died in July 2001.

"Knowing Janice as I did makes this a very special honor," Carroll said. "I'm very surprised."

Barry West, ACT President and Chief Information Officer for the Federal Emergency Management Agency, said Carroll rose to the top of the nominations for many reasons, including his willingness to mentor federal employees and his ability to bring people together to accomplish a project.

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FCS ACE Program Wins Army Knowledge Award

The U.S. Army Tank-automotive and Armaments Command Program Manager (PM) Future Combat Systems (FCS) Unit of Action (UA) program was awarded an Army Knowledge Award (AKA) for its Advanced Collaborative Environment (ACE) program during an awards ceremony at the 2004 Army Directors of Information Management Conference in Fort Lauderdale, FL, Aug. 30 to Sept. 3, 2004.

The FCS ACE program was one of seven Army programs to win an AKA, winning in the "E-Army" category. "The FCS Advanced Collaborative Environment has already had a major impact on the life cycle of FCS weapon platforms and helped to reduce the FCS program timeline," BG Charles Cartwright, PM UA, stated. "Use of the ACE is absolutely key and essential to all we are trying to do to achieve program objectives."

FCS is the biggest technology and integration challenge the Army has today. It is a networked system-of-systems — one large system made up of 18 individual systems, plus the network, plus the Soldier. It uses advanced communications and technologies to link Soldiers with both manned and unmanned ground and air platforms and sensors. FCS is agile — allowing forces to move quickly — and versatile — allowing troops to conduct a variety of missions. FCS has assembled a government and industry team through a revolutionary change in the relationship between the Army and its private sector industrial partners, Lead Systems Integrator — Boeing Co. and Science Applications International Corp. — and its selected subcontractors. Together, with other government agencies, this team is known as the FCS One-Team.

FCS ACE is the digital environment enabling the design, development, test, production and support of FCS weapon systems throughout their life cycle. It directly supports the ongoing system engineering effort for the weapon systems in development and is the medium from which program engineers and program managers conduct preliminary and critical design reviews, supporting all FCS program decisions and milestone reviews.

The FCS ACE program's innovative capabilities have shown that it can bring great cost savings to the Army and DOD. Army senior leaders have issued a policy announcing their intention to build on FCS ACE's success in developing an Army ACE that provides a common collaborative digital environment across Army acquisition programs.

The Army Chief Information Officer/G-6 AKA program recognizes outstanding examples of knowledge management initiatives that support enterprise solutions focused on improving situational awareness and decision making. These may include enhanced collaborative processes that improve organizational decision making, learning or development or the use of technology and reengineering to achieve process transformation that improves operational effectiveness and product, service and information flow to the user. The AKA program provides Army-level recognition for initiatives that provide knowledge-based capabilities for the enterprise, including solutions applicable at the major command, functional community or Army level, highlighting those that have achieved tangible success related to Army Knowledge Management goals and objectives.